

Service Manual

Turntable System

SL-1200MK2

[M], [MC],

[E], [EK], [XL], [EG], [EB], [EH],

[EF], [Ei], [XA], [PA], [PE], [PC]

SL-1210MK2

[E], [EG], [EH]

Supplement



- S770209
Grease for pop up light

* SL-1200MK2 is the model for silver type.

* SL-1210MK2 is the model for black type of SL-1200MK2.

Areas

- * [M] is available in the U.S.A.
- * [MC] is available in Canada.
- * [E] is available in Switzerland and Scandinavia.
- * [EK] is available in United Kingdom.
- * [XL] is available in Australia.
- * [EG] is available in F.R. Germany.
- * [EB] is available in Belgium.
- * [EH] is available in Holland.
- * [EF] is available in France.
- * [Ei] is available in Italy.
- * [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
- * [PA] is available in far East PX.
- * [PE] is available in European Military.
- * [PC] is available in European Audio Club.

Please use this manual together with the service manual for Model No. SL-1200MK2/1210MK2.

English

Specifications

Specifications are subject to change without notice for further improvement.
Weight and dimensions shown are approximate.

General

Power supply: 120V, AC 60 Hz (For [M], [MC] areas)
~110-120/220-240V, 50 or 60 Hz
(For other areas)

Power consumption: 14 W (For [M], [MC] areas)
13.5 W (For other areas)

Dimensions: 45.3 x 16.2 x 36 cm
(17-27/32" x 6-19/64" x 14-11/64")

Weight: 12.5 kg (27.6 lb)

Turntable section

Type: Quartz direct drive
Manual turntable

Drive method: Direct drive

Motor: Brushless DC motor

Turntable platter: Aluminum diecast
Diameter 33.2 cm (13-5/64")
Weight 2 kg (4.4 lb)

Turntable speeds: 33-1/3 rpm and 45 rpm

Starting torque: 1.5 kg · cm (1.3 lb · in)

Build-up characteristics: 0.7 s. from standstill to 33-1/3 rpm

Braking system: Electronic brake

Wow and flutter: 0.01% WRMS*
0.025% WRMS (JIS C5521)
± 0.035% peak (IEC 98A Weighted)

* This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonearm, but including platter.
Measured by obtaining signal from built-in frequency generator of motor assembly.

Rumble: -56 dB (IEC 98A Unweighted)
-78 dB (IEC 98A Weighted)

Matsushita Engineering and Service Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Hawaii Inc.
91-238 Kauhū St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

Panasonic Sales Company,
Division of Matsushita Electric of Puerto Rico, Inc.
Ave. 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

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5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Technics

Panasonic Tokyo
Matsushita Electric Industrial Co., Ltd.
1-2, 1-chome, Shibakoen, Minato-ku, Tokyo 105 Japan

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

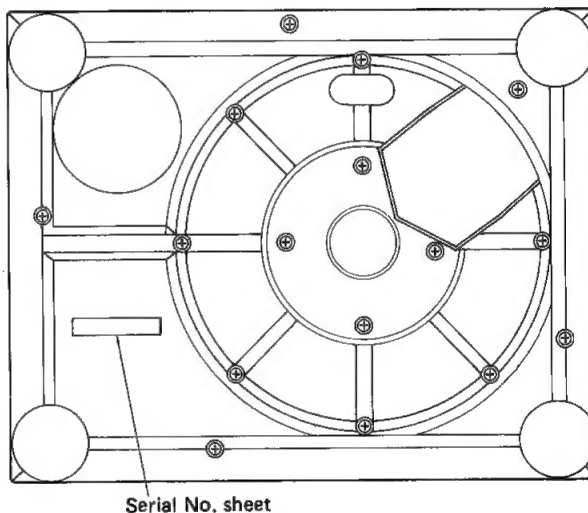
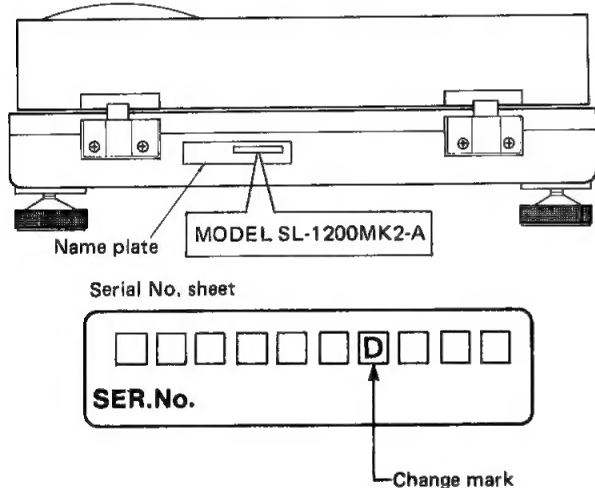
■ Tonearm section

Type:	Universal
Effective length:	230 mm (9-1/16")
Arm height adjustment range:	0 — 6 mm
Overhang:	15 mm (19/32")
Effective mass:	12 g (without cartridge)
Offset angle:	22°
Friction:	Less than 7 mg (lateral, vertical)
Tracking error angle:	Within 2°32' (at the outer groove of 30 cm (12") record Within 0°32' (at the inner groove of 30 cm (12") record

Stylus pressure adjustment range:	0 — 2.5 g
Applicable cartridge weight range:	6 — 10 g
	13.5 — 17.5 g (including headshell)
(with auxiliary weight):	9.5 — 13 g
	17 — 20.5 g (including headshell)
(with shell weight):	3.5 — 6.5 g
	11 — 14 g (including headshell)
Headshell weight:	7.5 g

Notes

- ★ To improve the performance of SL-1200MK2/1210MK2, the bottom structure and circuit are changed in the course of production.
- ★ After the change, SL1200MK2-A/1210MK2-A is indicated in the name plate as the model of the set. It is discriminated from before-change set by -A. Also, check that the present change is of the sets after the change mark **□** shown in the serial No. sheet attached to the bottom and carton box.
- ★ This supplement service manual contains the bottom plate disassembly procedure, change part No., circuit diagram, P.C.B. and block diagrams. The other contents are the same as for the service manual of SL-1200MK2/1210MK2 already issued.
- ★ Sets with cartridge (EPC-207C) are included in those for same areas.
- ★ Since the power transformer fitting method is different for sets with serial number sheet change mark **□**, refer to the development plan on page 8.



■ DISASSEMBLY INSTRUCTIONS

● How to remove the bottom cover and bottom base.

1. Remove the turntable mat and turntable.
2. Turn over the body on a soft cloth taking care not to damage the dust cover.
3. Remove the insulators and the 21 setscrews (**Fig. 1 : ①, ②, ③**) of the bottom cover.
4. Remove the 6 setscrews (**Fig. 2 : ④**) of the bottom base.

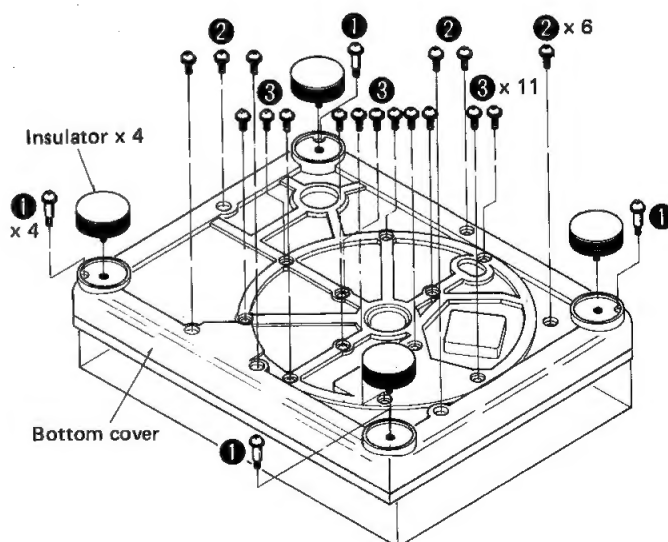


Fig. 1

● How to remove the hinge case

1. Remove the bottom cover. (Refer to "How to remove the bottom cover".)
2. Remove the 4 setscrews (Fig. 2 : ⑤) of the hinge case bracket.

3. Remove the 4 setscrews (Fig. 2 : ⑥) of the hinge case.

Note: The other disassembly procedure are the same as for before-change sets.

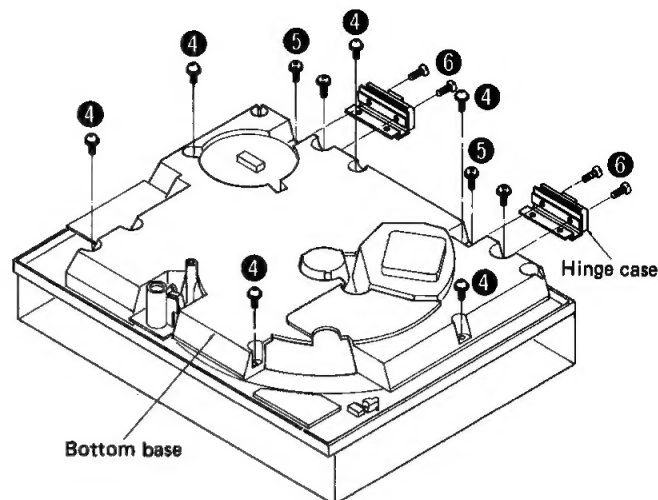


Fig. 2

■ REPLACEMENT PARTS LIST

Notes:

1. This parts list mentions only the difference between before and after change of SL-1200MK2/1210MK2.
2. (K)-marked parts are used only for SL-1210MK2 (black type). And (O)-marked parts are used for SL1200MK2 (silver type).
3. Parts other than (K)- and (O)-marked are used for both SL-1210MK2 and SL-1200MK2.
4. The "S" mark is service standard parts and may differ from production parts.

Areas

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- * [PC] is available in European Audio Club.

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks
	SL-1200MK2 (Before Change)	SL-1200MK2/1210MK2 (After Change)			
INTEGRATED CIRCUIT					
IC302	SVITC4011BP	MN4011B	NAND Gate	1	
TRANSISTOR					
Q1	2SD389A-Q	2SD1265	Regulator	1	
DIODES					
D1	SVDS1RBA40	SVDS1RBA20Z	Rectifier	1	△
D201, 202	SVDSR-105C	SVDPR3902S-9	Speed Indicator	2	
D203 ~ 206	SVDEBR5505S	SVDSLH54VT3	Strobe	4	
D401	SVDGL-9PG2	SVDGL-9NG2	Pitch Indicator	1	
CRYSTAL					
X201	SVQU306115	SVQMS4193	4.193 MHz, Oscillator	1	
VARIABLE RESISTORS					
VR301	EVMH2GA00B53	EVMH1GA00B23	Pitch Control Adjustment, 2kΩ (B)	1	
VR303	EVBJ05C19ABE	SFDZ122N11	Pitch Control	1	
SWITCHES					
S203	SFDSS5GL13C	SFDSS01GL13	Start/Stop	1	
S601	SFDSS5GL13S	SFDSS5GL13P	Power	1	△
TRANSFORMER					
T1	SLT60EU7B	SLT66DTL3A [M]	Power Source	1	△
T1	SLT60E31C	SLT66DT14C [MC]	Power Source	1	△
T1	SLTF5900	SLT66DTE13A [Other areas]	Power Source	1	△

Ref. No.	Change of Part No.		Part Name & Description	Per Set (Pcs.)	Remarks
	SL-1200MK2 (Before Change)	SL-1200MK2/1210MK2 (After Change)			
TONEARM PARTS					
62	SFPAM18201K	SFPAM18201K	Tonearm Ass'y (Silver)	1	○
		SFPAM18202K	Tonearm Ass'y (Black)	1	Ⓚ
79	SFPKB17201S	SFPKB17204E	Ring, Arm Base Operation	1	
82	SFGK132-01	SFGK132-01	Cap (Silver)	1	○
		SFGK133S01	Cap (Black)	1	Ⓚ
ACCESSORIES					
A1	SFNU122M01	SFNU122M06 [M]	Instruction Book	1	
	SFNU122C01	SFNU122C06	Instruction Book	1	
	SFNU122S01	SFNU122S01 [E]	Instruction Book	1	
	SFNU122G01	SFNU122G01 [EK]	Instruction Book	1	
	Addition	SFNU122P01 [PA, PE, PC]	Instruction Book	1	
	SFNU122X01	SFNU122X01 [Other areas]	Instruction Book	1	
A2	SFWE010	SFWE122-01	45 Adaptor	1	
PACKING PARTS					
P1	SFHP122C01 SFHP122M01	SFHP122C02 [MC, EF]	Carton Box (Silver)	1	○
		SFHP122M02 [Other areas]	Carton Box (Silver)	1	○
		SFHP124S02	Carbon Box (Black)	1	Ⓚ
P9	Addition	SPB1083	Polyethylene Bag, Accessories	2	
P10	Addition	SPJ15	Polyethylene Bag, Shell Weight	1	
P11	Addition	SFHZD03M01	Polyethylene Bag, Dust Cover	3	
P12	Addition	SFHZ122-01	Polyethylene Bag, 45 Adaptor	1	
P13	Addition	SPP189	Polyethylene Bag, Cords	2	

■ ADJUSTMENT POINTS

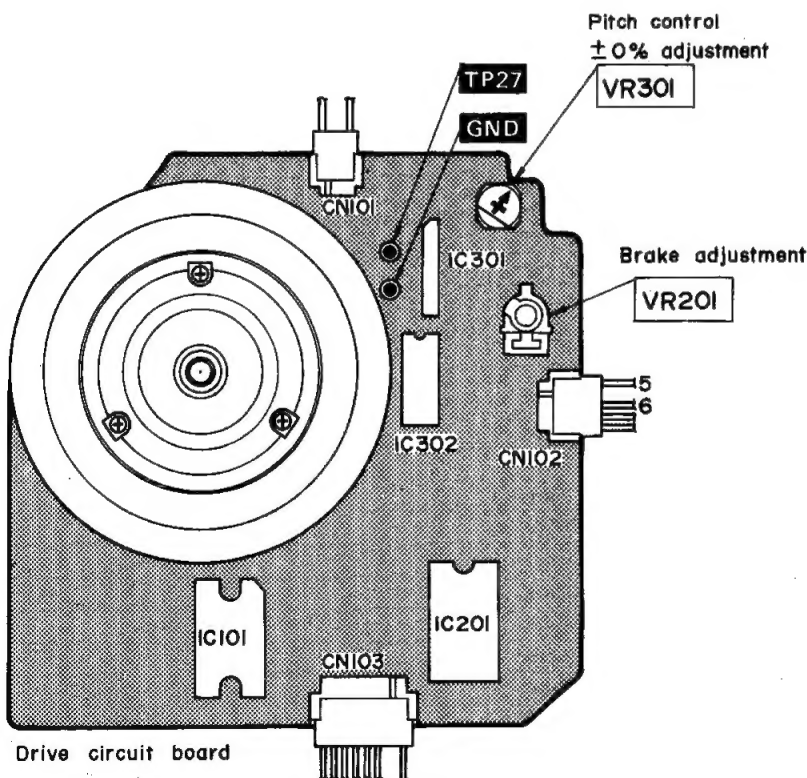


Fig. 3 (Abb. 3)

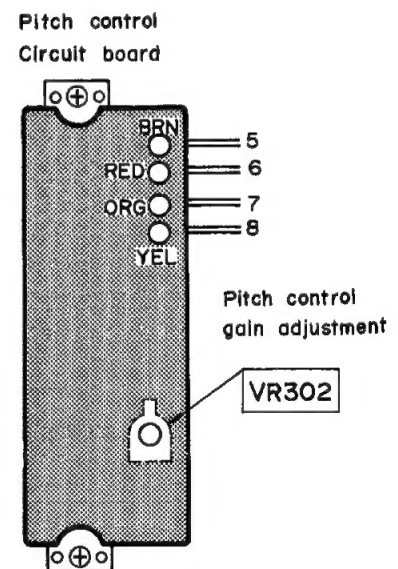


Fig. 4 (Abb. 4)

MEASUREMENTS AND ADJUSTMENTS **English**

- Conditions of set, and instruments used

1. Remove the panel cover.
2. Remove the bottom cover (when adjusting the pitch control gain).

3. Frequency counter
4. Tester

	Adjustment	Connection	Parts adjusted	Procedure
1	Pitch control $\pm 0\%$ adjustment	Frequency counter (+) — TP27 (-) — Earth point	VR301 (Fig.3)	<ol style="list-style-type: none"> 1. Connect the frequency counter and turn the power supply ON. 2. Set the pitch control knob to "0". (Indicator lights up.) 3. Adjust VR301 so that the frequency is $262.08 \text{ kHz} \pm 0.05 \text{ kHz}$.
2	Pitch control gain adjustment	Tester (+) — CN102 terminal ⑤ (-) — CN102 terminal ⑥	VR302 (Fig. 4)	<ol style="list-style-type: none"> 1. Set the pitch control knob to "0". 2. Pull out the connector CN102 of drive P.C.B. 3. Connect the tester to terminals ⑤ and ⑥ of connector CN102 on the pitch control P.C.B. side. 4. Adjust VR302 so that the resistance value of the tester is $2.7 \text{ k}\Omega \pm 0.1 \text{ k}\Omega$.
3	Brake adjustment	_____	VR201 (Fig. 3)	<ol style="list-style-type: none"> 1. Adjust VR201 so that the rotation at 33 r.p.m. stops within the angle of $90^\circ \sim 120^\circ$ after depressing the stop button.

■ DISASSEMBLY PROCEDURE

How to remove panel cover

1. Remove head shell and turntable.
2. Secure arm with arm clamp.
3. Remove 5 screws **A** of the panel cover as shown in Fig. 1.

How to remove stator frame coil and F.G detector coil

4. Remove 3 connectors **B** and 2 read wires **C** from power transformer as shown in Fig. 2.
5. Remove 3 screws **D** of the drive circuit board and 3 screws **E** of the stator frame cover as shown in Fig. 2.
6. Disconnect 18 soldered parts **F** of the stator coil and 4 soldered parts **G** of the F.G detector coil as shown in Fig. 3.
7. Remove 3 screws **H** of the stator frame ass'y as shown in Fig. 3.

How to remove bottom base ass'y

8. Remove 4 audio insulators. (Counterclockwise rotation)
9. Remove 17 screws and spacer **I** as shown in Fig. 4.
10. Remove 11 screws **J** as shown in Fig. 4.

How to remove stylus-illuminator lamp

11. Remove 2 screws **K** of the stylus-illuminator lamp ass'y as shown in Fig. 5.
12. Remove 1 screw **L** as shown in Fig. 6.

How to remove neon-illuminator L.E.D.

13. Remove 4 screws **M** as shown in Fig. 5.
14. Remove 1 circlip **N** and switch cam **O** as shown in Fig. 5.
15. Remove strobo-illuminator case.

How to remove tone arm

16. Remove 4 screws **P** of the arm base cover as shown in Fig. 5.
17. Remove 2 screws **Q** of the phono cord clamber as shown in Fig. 5.
18. Remove phono cord clamber as shown in Fig. 7.
19. Remove 2 screws **R** of the phono cord p.c.b. as shown in Fig. 8.
20. Remove 2 screws **S** as shown in Fig. 8.
21. Remove 2 screws **T** of the silicon oil dumper as shown in Fig. 8.
22. Remove 3 screws **U** as shown in Fig. 8.
23. Remove 2 screws **X** of the tone arm as shown in Fig. 9.

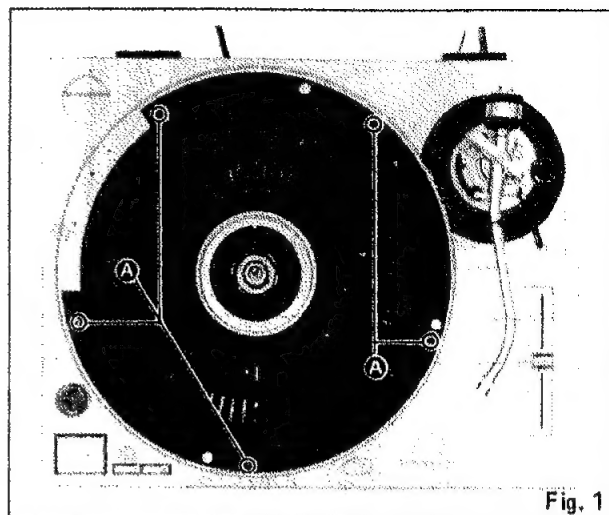


Fig. 1

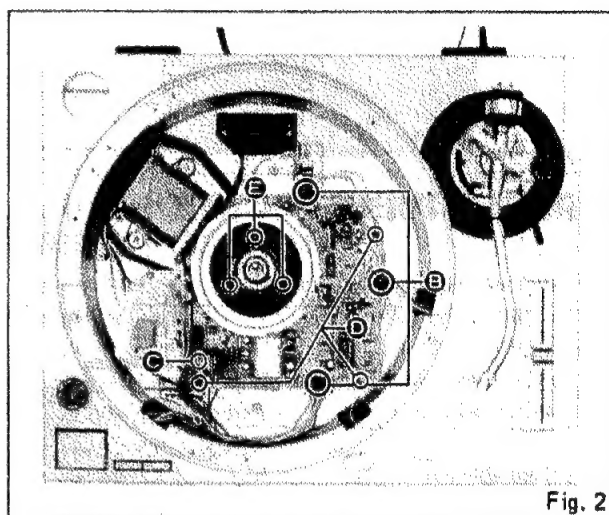


Fig. 2

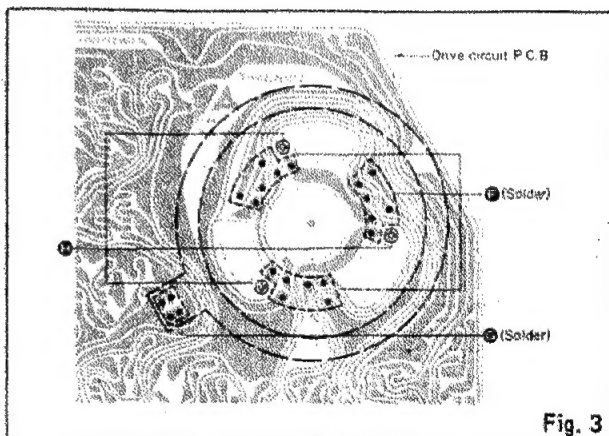


Fig. 3

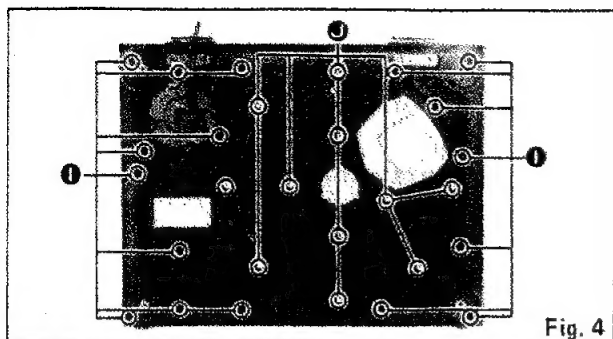


Fig. 4

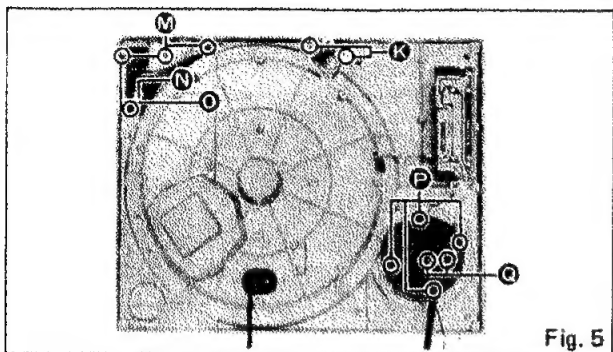


Fig. 5

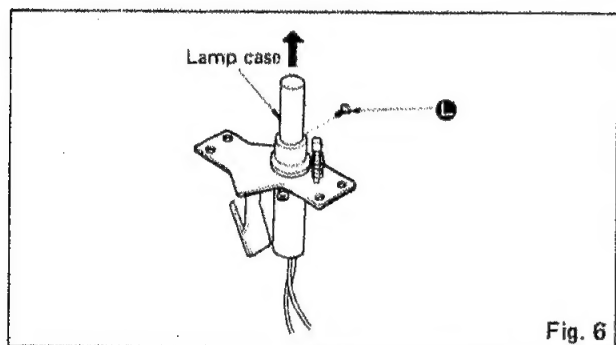


Fig. 6

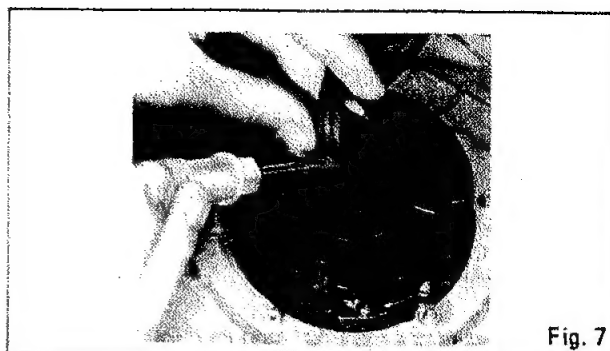


Fig. 7

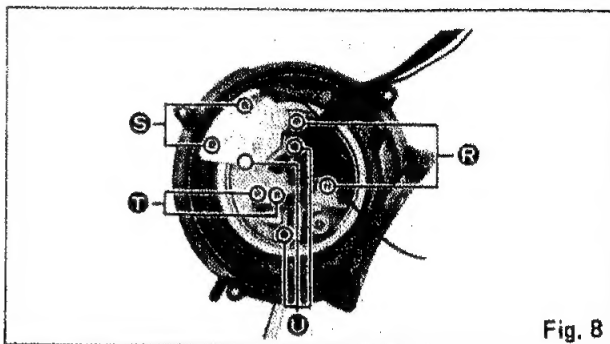


Fig. 8

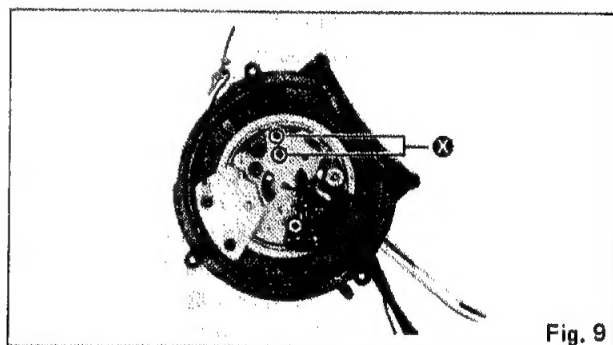


Fig. 9

■ PARTS IDENTIFICATION

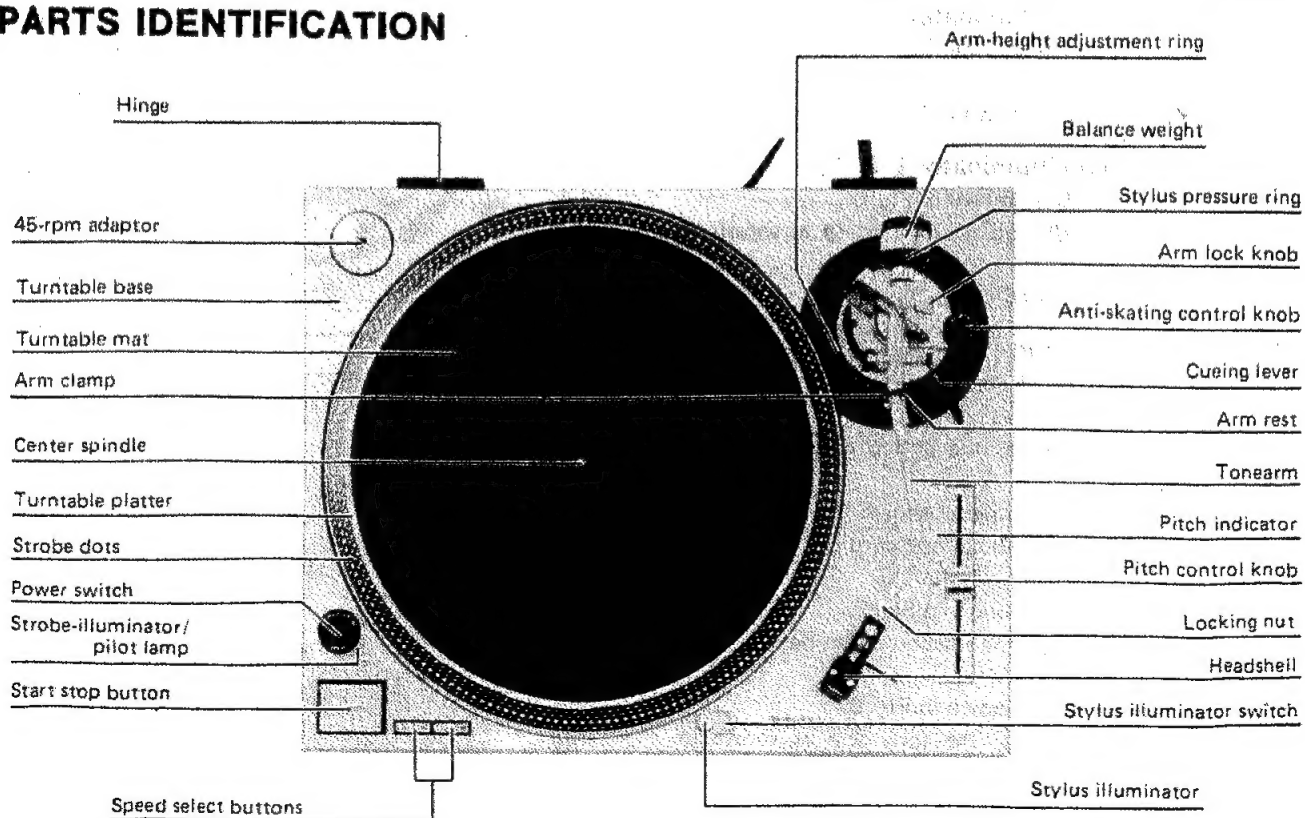


Fig. 10

■ ARM BASE ASSEMBLING PROCEDURE

1. Attach the control ring to the arm base seat. (The control ring should be rotated counterclockwise.)
2. Completely tighten the control ring, and then loosen it 1.5~2.5 turns to set the scale to "3". (See Fig. 11)

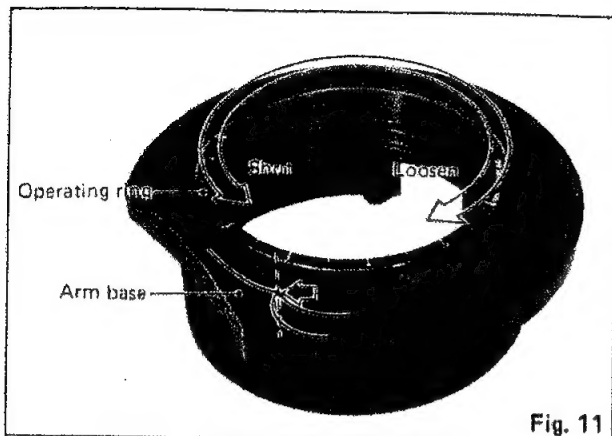


Fig. 11

3. Hold the arm base and set the red line mark on the arm base to the scale near "2", then turn the arm base clockwise. (See Fig. 12)

Note:

Take care not to allow deflection of the predetermined positions of the control ring and arm base seat.

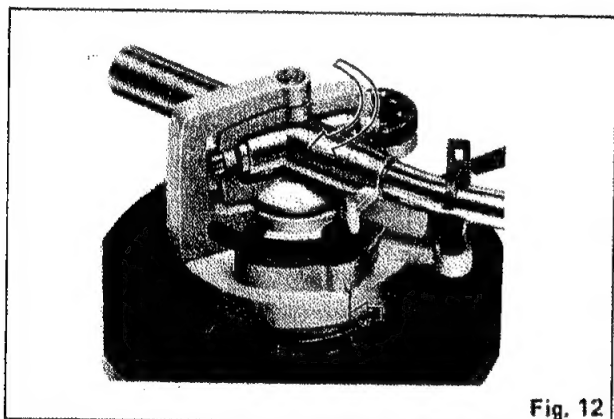


Fig. 12

4. Adjust the arm base so that the red line mark on the arm base is set to the scale "3" of the control ring. Next, secure the positioning base plate with two setscrews. (See Fig. 13)

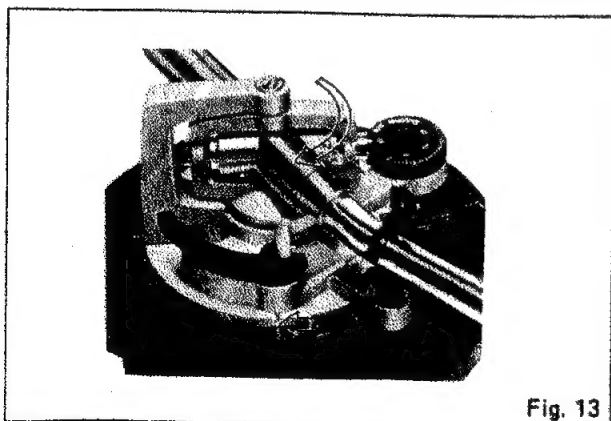


Fig. 13

5. Rotate the control ring and make sure that the arm base shifts within the range of 0~6mm. (See Figs. 14 and 15) If it does not shift within the specified range, the arm base position is deflected. In that case, disassemble the parts and check as specified in step 3.

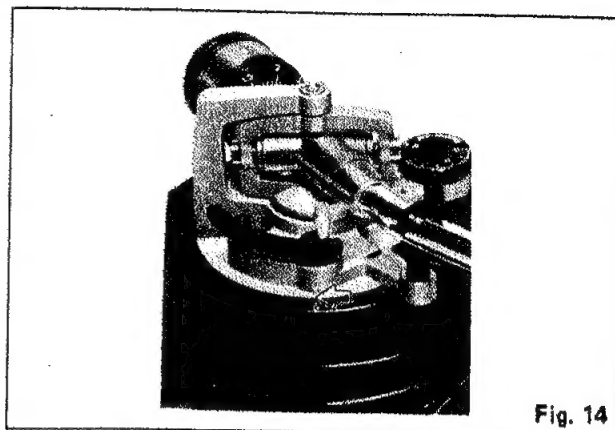


Fig. 14

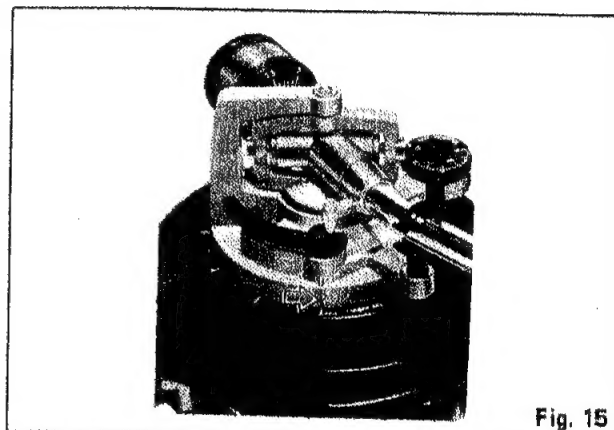


Fig. 15

■ ADJUSTMENT OF CANCELLER SPRING POSITION

If the arm body or PU base plate is replaced, be sure to set the canceller knob to "0.5" and make sure that the canceller spring is in contact with the arm shaft. (See Fig. 16)

If the canceller spring is deflected, adjust it as follows:

1. Clamp the arm on the rest.
2. Set the canceller knob to "0.5".
3. Remove the PU base plate, adjust gear A so that the canceller spring is in the position of Fig. 16.
4. Mount the PU base plate onto the arm base and check the spring position.

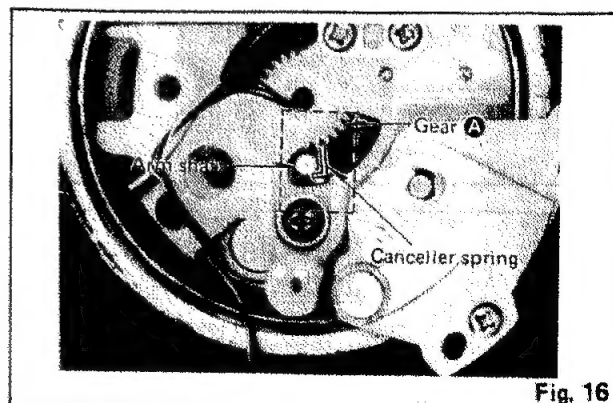


Fig. 16

■ ADJUSTMENTS

Pitch control (fine adjustment of speed) (See Figs. 18 and 19.)

When the pitch control knob is located at the center of the position after turning on the power, the green LED indicator is lit showing the operating condition for the predetermined speed (either 33-1/3 or 45 rpm). The pitch control is variable in a range of about $\pm 8\%$

Adjustment should be done on the basis of indicator scale. Figures on the indicator show approximate percentages for variable pitch control.

When the strobe dots in 4 stages marked at the peripheral edge of the turntable appear to be stationary, variation of individual pitches is shown. (See Fig. 19.)

Note:

The strobe-illumination of this unit employs a strobe-illuminator LED synchronized with the precise quartz frequency.

For fine adjustment of the turntable speed, be sure to effect the adjustment according to the LED illumination.

The LED illumination is not synchronized with fluorescent lamps.

Adjustment of arm-lift height (See Figs. 20 and 21.)

The arm-lift height (distance between the stylus tip and record surface when cueing lever is raised) has been adjusted at the factory before shipping to approximately 8-13mm.

If the clearance becomes too narrow or too wide, turn the adjustment screw clockwise or counterclockwise, while pushing the arm lift down.

Clockwise rotation

—distance between the record and stylus tip is decreased.

Counterclockwise rotation

—distance between the record and stylus tip is increased.

Note:

As the adjusting screw has hexagonal head, be sure to make the adjustment while depressing the arm lift, or the screw will not move freely.

Also be sure that the hexagonal head retracts correctly into the arm lift when the latter is released.

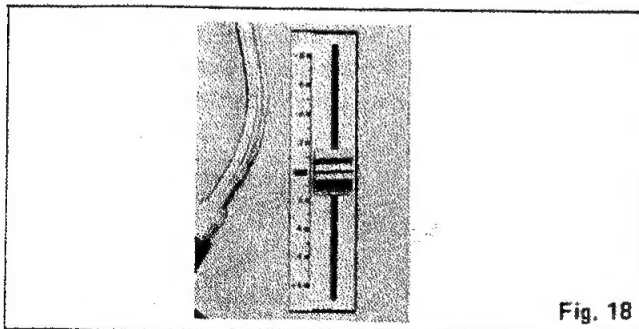


Fig. 18

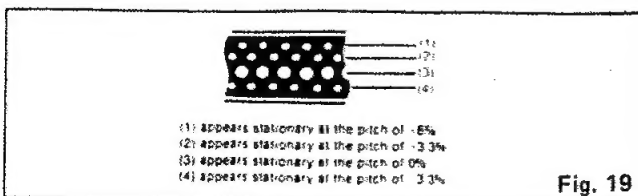


Fig. 19

Adjustment of the tonearm height (See Fig. 22.)

The height of the tonearm can be adjusted up to 6 mm, and a scale is provided on the adjust ring in 0.5 mm increments. Be sure to set the proper arm height using the adjust ring scale and referring to the table.

Height of cartridge (mm) (H)	Scale reading on the arm-height adjust ring
15	0
16	1
17	2
18	3
19	4
20	5
21	6

For example, if the cartridge height is 17.5 mm, the arm-height adjust ring should be positioned at the intermediate location between 2 and 3 on the scale. (See Fig. 22.)

Caution:

Be sure to lock the tonearm by turning the arm lock knob in the direction indicated by the arrow after finishing the height adjustment for the tonearm.

Lubrication (See Fig. 23.)

Apply 2 or 3 drops of oil once after every 2000 hours' of operation.

The time interval is much longer than that for conventional type motors (200-500 hours).

Please purchase original oil. (Part number is SFWO 010.)

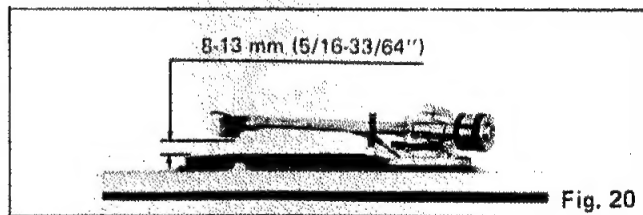


Fig. 20



Fig. 21

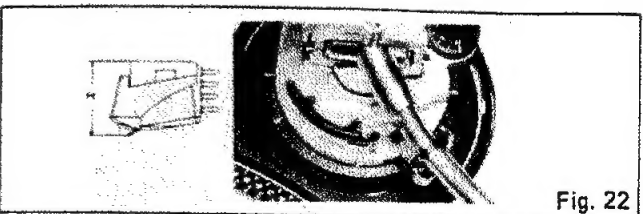


Fig. 22

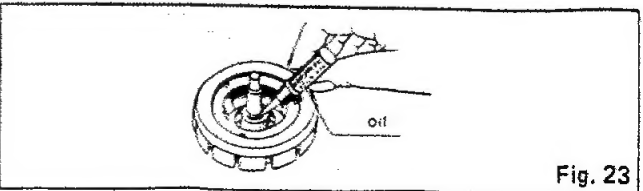


Fig. 23

RESISTORS AND CAPACITORS

- Notes:**
- Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
 - Important safety notice:
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
 - The "S" mark is service standard parts and may differ from production parts.
 - Bracketed indications in Ref. No. column specify the area. Parts without these indications can be used for all area.
 - The unit of resistance is Ω (ohm).
K = 1000 Ω , M = 1000k Ω
 - The unit capacitance is μ F (microfarad).
P = 10⁻⁶ μ F

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- * [PE] is available in European Military.
- * [PC] is available in European Audio Club.

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	2R2
Type	Wattage	Shape	Tolerance	Value

Resistor type	Wattage	Tolerance
ERD: Carbon	25 : 1/4W	F : $\pm 1\%$
ERG: Metal Oxide	50 : 1/2W	J : $\pm 5\%$
ERO: Metal Film	1A: 1W	
ERX: Metal Film	2A: 2W	

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F.
Type	Voltage	Value	Tolerance	Peculiarity
ECEA	50	M	R47	R
Type	Voltage	Recularity use	Value	Special use

Capacitor Type	Voltage	Tolerance
ECEA : Electrolytic	OJ : 6.3V	J : $\pm 5\%$
ECEB : Electrolytic	1C : 16V	K : $\pm 5\%$
ECCD : Ceramic	1E : 25V	M : $\pm 20\%$
ECQM : Polyester	1H : 50V	Z : $+80\%, -20\%$
ECQU : Polyester	1 : 100V	
ECQF : Polyester	1A : 125V	
ECNC : Polyester	4A : 400V	

Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value	Ref. No.	Part No.	Value
RESISTORS			CAPACITORS								
R1	ERD25FJ562	5.6K	R210	ERD25TJ183	18K	C1	ECEB1HU471	470	C210	ECQM1H224JZ	0.22
R2	ERD25FJ682	6.8K	R211	ERD25FJ472	4.7K	C2	ECEA1EU330	33	C211	ECQM1H473JZ	0.047
R3	ERD25FJ272	2.7K	R212	ERD25FJ151	150	C3	ECEA1EU220	22	C212	ECEA1HU3R3	3.3
R4,5	ERD25FJ471	470	R213	ERD25FJ122	1.2K	C5,6	ECQM1223KZ	0.022	C213	ECCD1H471K	470P
R101	ERD25FJ103	10K	R214	ERD25TJ223	22K	C101,102	ECEA1EU330	33	C214	ECEA1CU101	100
R102	ERX1ANJ4R7	4.7	R215	ERD25FJ472	4.7K	C103	ECEA1EU330	33	C215	ECEA1HU010	1
R103	ERD25FJ472	4.7K	R216	ERD25TJ154	150K	C104,105	ECQM1H104JZ	0.1	C216	ECEA1CU470	47
R104	ERD25TJ473	47K	R217	ERD25TJ223	22K	C106,107	ECQM1H104JZ	0.1	C217,218	ECKD1H104ZF	0.1
R105	ERD25FJ103	10K	R218	ERD25FJ102	1K	C108	ECEA1EU101	100	C219	ECKD1H104ZF	0.1
R106	ERD25FJ150	15	R219	ERD25FJ332	3.3K	C109,110	ECQM1H104JZ	0.1	C301	ECQK1333GZ	0.033
R107	ERX1ANJ1R5	1.5	R220	ERD25FJ221	220	C111	ECQM1H562JZ	0.0056	C302	ECQK1682GZ	0.0068
R108	ERD25FJ103	10K	R221	ERD25FJ471	470	C112	ECEA1HU4R7	4.7	C303	ECEA1HU010	1
R109,110	ERX1ANJ4R7	4.7	R222	ERD25FJ391	390	C201	ECEA1CU330	33	C304	ECEA1CU100	10
R201	ERG1ANJ561	560	R301	ERD25CKF2701	2.7K	C202,203	ECEA1HU010	1	C305	ECQM1H122JZ	0.0012
R202	ERD25FJ103	10K	R302	ERD25FJ471	470	C204	ECQM1H473JZ	0.047	C306	ECEA1HU010	1
R203	ERD25FJ470	47	R303	ERD25FJ822	8.2K	C205	ECEA0JU221	220	C801 (M) Δ C801 (MC) Δ C801 (Other areas) Δ	ECQF1A473MD	0.047
R204	ERD25FJ272	2.7K	R304	ERD25FJ561	560	C206	ECEA1HU010	1		ECQU1A47ME	0.047
R205	ERD25TJ124	120K	R305	ERD25FJ181	180	C207	ECCD1H101K	100P		ECNC4A473M	0.047
R206	ERD25TJ183	18K	R306	ERD25TJ223	22K	C208	ECCD1H220K	22P			
R207	ERD25TJ563	56K	R307	ERD25FJ272	2.7K	C209	ECEA1CU101	100			
R208	ERD25TJ224	220K	R401	ERD50FJ152	1.5K						
R209	ERD25TJ334	330K	R601	ERD50FJ4R7	4.7						

REPLACEMENT PARTS LIST

- Notes:**
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
 2. Important safety notice:
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
 3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
 4. The "(S)" mark is service standard parts and may differ from production parts.
 5. The parenthesized numbers in the column of description stand for the quantity per set.
 6. (K)-marked parts are used only for SL-1210MK2 (black type). And (O)-marked parts are used for SL-1200MK2 (silver type).
 7. Parts other than (K)- and (O)-marked are used for both SL-1210MK2 and SL-1200MK2.

Areas

- * [M] is available in the U.S.A.
- * [MC] is available in Canada.
- * [E] is available in Switzerland and Scandinavia.
- * [EK] is available in United Kingdom.
- * [XL] is available in Australia.
- * [EG] is available in F.R. Germany.
- * [EB] is available in Belgium.
- * [EH] is available in Holland.
- * [EF] is available in France.
- * [Ei] is available in Italy.
- * [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
- * [PA] is available in far East PX.
- * [PE] is available in European Military.
- * [PC] is available in European Audio Club.

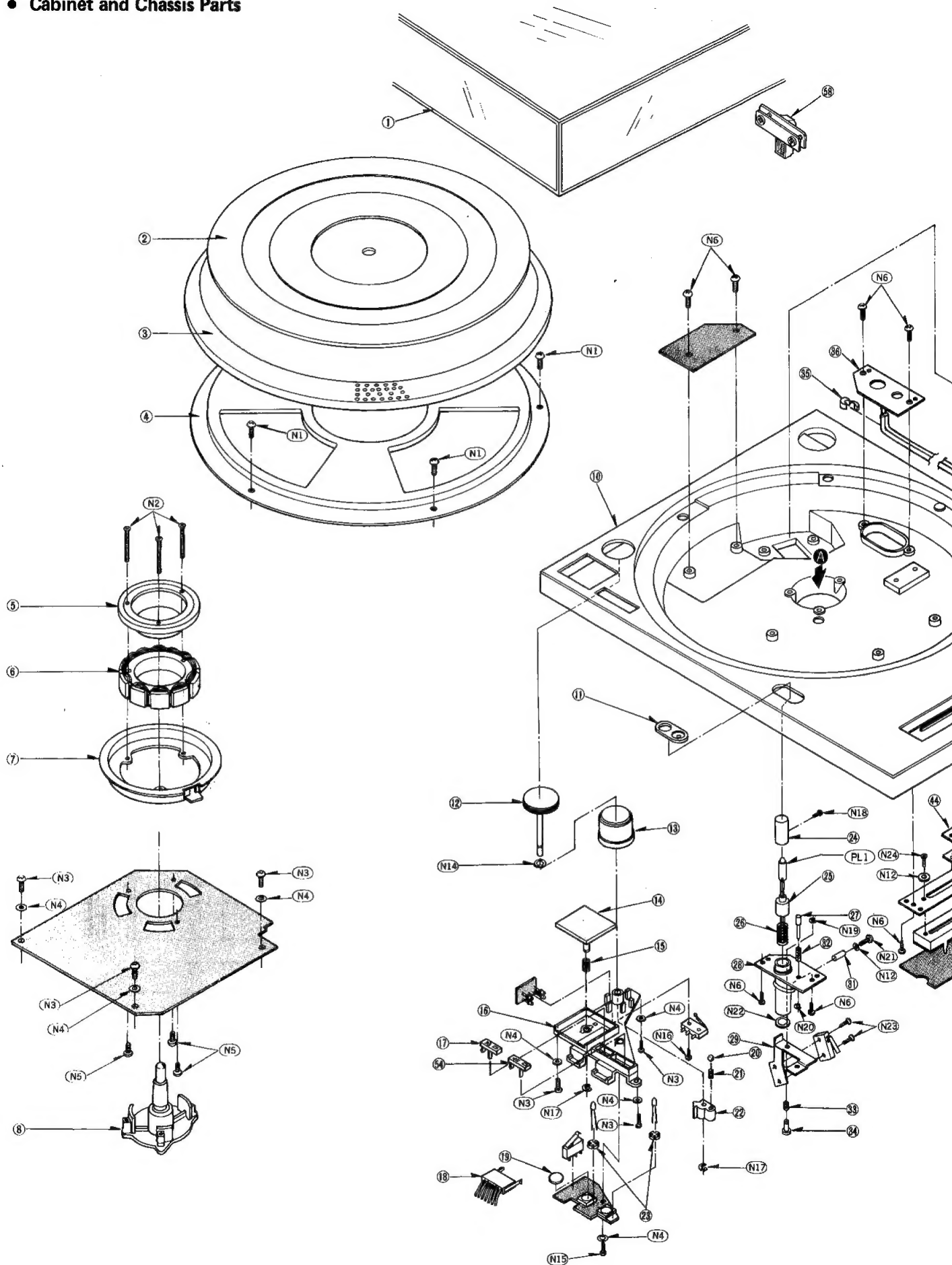
Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC101	AN6675	Turntable Drive
IC201	AN6680	Turntable Control
IC301	AN6682	Pitch Control
IC302	MN4011B	NAND Gate
TRANSISTORS		
Q1	2SD1265	Regulator
Q2,3	2SD637	Regulator
Q201	(S) 2SC1846-R	Regulator
Q202	2SD637	LED Driver
Q203	(S) 2SC1328-T	FG Amp.
DIODES		
D1	Δ SVDS1RBA20Z	Rectifier
D2	MA1051	5.1V Zener
D201,202	SVDP3902S-9	Speed Indicator
D203~206	SVDSLH54VT3	Strobe
D204A	MA162A	Switching
D301	MA1051	5.1V Zener
D401	SVDDL-9NG2	Pitch Indicator

Ref. No.	Part No.	Description
CRYSTAL		
X201	SVQMS4193	4.193MHz Oscillator
VARIABLE RESISTORS		
VR201	(S) EVTS3MA00B54	Brake Adjustment, 50k Ω (B)
VR301	EVMH1GA00B23	Pitch Control $\pm 0\%$ Adjustment, 2k Ω (B)
VR302	(S) EVTS3MA00B54	Pitch Control Gain Adjustment, 50k Ω (B)
VR303	SFDZ122N11	Pitch Control
SWITCHES		
S201,202	EVQP5R04K	Speed Selector
S203	SFDS5S01GL13	Start/Stop
S401	SFDS02MSL-C	Stylus-Illuminator
S601	Δ SFDS5S5GL13P	Power
S602 Except for [M,MC]	Δ SFDSHXW01317	Voltage Selector

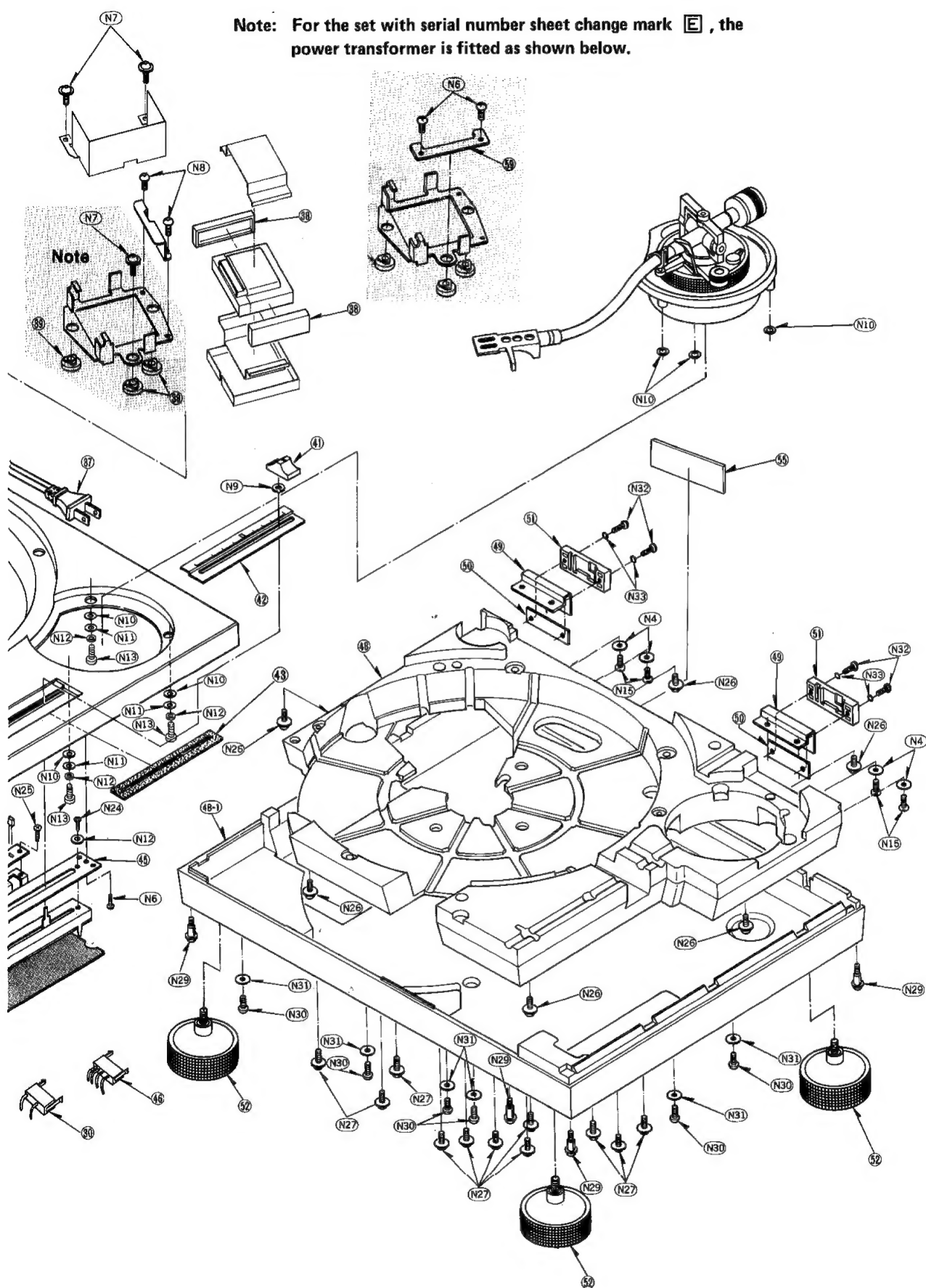
Ref. No.	Part No.	Description
LAMP		
PL1	Δ SFDN122-01	Stylus Illuminator
TRANSFORMER		
T1 [M]	Δ SLT66DTL3A	Power Source
T1 [MC]	Δ SLT66DT14C	Power Source
T1 [Other areas]	Δ SLT66DTE13E	Power Source
FUSES		
F1 [MC]	Δ XBA1F12NU14	125V, 1.2A
F1 Except for [M,MC]	Δ XBA2C025T1A	250V, T250mA
F1 Except for [M,MC]	Δ XBA2C10TR0	250V, T1A

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CHABINET AND CHASSIS PARTS			TONEARM PARTS			ACCESSORIES		
1	SFAD122-01A	Dust Cover (1)	52	SFGC122-02E	Insulator (4)	N31	⊙ XWG3FZ	Washer (6)
2	SFTG172-01	Turntable Mat (1)	54	SFKT015-02E	Button, Speed (4)	N32	⊙ XSN3+14BVS	Screw (4)
3	SFTE172-01	Turntable Platter Ass'y (1)	55(M)	⊙ SFNN122M10.	Name Plate (1)	N33	⊙ XWA3BFZ	Washer (4)
4	SFUM172-05	Cover, Cabinet (1)	55(MC)	⊙ SFNN122C10	Name Plate (1)	N34	SFXG829-1	Screw (1)
5	SFMGQ20-01	Cover, Drive Coll (1)	55(E)	⊙ SFNN122S10	Name Plate (1)	N35	⊙ XSN3+8S	Screw (2)
6	SFMG520-31A	Drive Coll Ass'y (1)	55(EK,XL)	⊙ SFNN122G10	Name Plate (1)	N36	⊙ XUC5FT	Circlip (1)
7	SFMZ172-01E	FG Coll Ass'y (1)	55(XA)	⊙ SFNN122X10	Name Plate (1)	N37	SFPEV17202	Screw (3)
8	SFMZQ20-01A	Shaft Ass'y, Turntable (1)	55(PA,PE)	⊙ SFNN122P10	Name Plate (1)	N38	⊙ XTN3+25B	Screw (1)
10	⊙ SFAC122-01	Cabinet (Silver)	55(PC)	⊙ SFNN122P11	Name Plate (1)	N39	SFPEW1100	Washer (1)
10	⊙ SFAC124S01	Cabinet (Black)	55(Other areas)	⊙ SFNN122N10	Name Plate (1)	N40	⊙ XSN3+8BVS	Screw (4)
11	SFUM172-04	Ornament, Stylus Illuminator (1)	55(E)	⊙ SFNN124S10	Name Plate (1)	N41	⊙ XWC3BFZ	Washer (1)
12	SFKT122-01	Knob, Power Switch (1)	55	⊙ SFNN124Q10	Name Plate (1)	N42	⊙ XSN3+12BVS	Screw (2)
13	SFKK122-01E	Case, Strobe Illuminator (1)	55(EG,EH)			N43	⊙ XWG3FZ	Washer (2)
14	SFKT015-06	Button, Start/Stop (1)	58	SFATM02N01A	Hinge (2)	N44	SFXW701-02	Washer (1)
15	SFQA122-01	Spring, Start/Stop Button (1)	59	SFUP122-25	Plate, Power transformer (1)	N45	SFPEW00705	Washer (4)
16	SFUM122-01	Base, Operation (1)	SCREW, NUT AND WASHERS			N46	XTW26+5E	Screw (1)
17	SFKT015-01E	Button, Speed (1)	61	SFPC31001K	Headshell (1)	PACKING PARTS		
18	SFDJ122-02E	Connector, 7pin (1)	62	⊙ SFPAM18201K	Tonearm Ass'y (Silver) (1)	A1(M)	SFNU122M06	Instruction Book (1)
19	SFGZ122-01	Spacer, Rubber (1)	62	⊙ SEPAM18202K	Tonearm Ass'y (Black) (1)	A1(MC)	SFNU122C06	Instruction Book (1)
20	SFYB-5-32	Ball, Switch Cam (1)	63	SFPWG17201K	Balance Weight (1)	A1(E,EB,EC)	SFNU122S01	Instruction Book (1)
21	SFQA520-01	Spring, Switch Cam (1)	64	SFPRT18201K	Lift Ass'y (1)	A1(EK)	SFNU122G01	Instruction Book (1)
22	SFUM122-03	Cam, Power Switch (1)	65	SFPZB17202	Knob, Arm Base Lock (1)	A1(PA, PE, PC)	SFNU122P01	Instruction Book (1)
23	SFUM015-11	Spacer, Speed Indicator (2)	66	SFQA829-03	Spring, Lift Ass'y (1)	A1(Other areas)	SFNU122X01	Instruction Book (1)
24	SFKK172-01	Cover, Stylus Illuminator (1)	67	SFPAB13202	Knob, Arm Lift (1)	A2	SFWE010	45 Adaptor (1)
25	SFXB122-06	Boss, Drive (1)	68	SFPJL18202K	Oil Damper (1)	A3	SFPEN3302	Nut, Cartridge (2)
26	SFQA172-01	Spring, Drive Boss (1)	70	SFPZB12203	Plate, Arm Base Cover (1)	A4	SFPEW9601	Washer, Cartridge (2)
27	SFXJ172-01	Pin, Lock Canceler (1)	71	SFUM170-06	Spacer, Phono Cord (1)	A5	SFCZV8801	Screw, Cartridge (2)
28	SFUP122-02E	Bracket, Stylus Illuminator (1)	72	SEPZB12204	Clamper, Phono Cord (1)	A6	SFPEV9801	Screw, Cartridge (2)
29	SFUP122-03	Plate, Lock Operation (1)	73	SFPAB18201K	Tonearm Fixing Plate (1)	A7	SFK0135-01	Overhang Gauge (1)
30	SFDJ122-03E	Connector, 3pin (1)	74	SFPZB12201K	Plate (1)	A8	SFPZB3601	Shell Weight (1)
31	SFX0172-01	Pin, Guide (1)	75	SFDH122-05	Phono Cord (1)	A9	SF0K119118	2pin Plug (1)
32	SFQA520-01	Spring, Lock Canceler (1)	76	SFEL028-01E	Ground Wire (1)	[XA] Only	SFPWG17202	Sub-weight (1)
33	SFQA122-02	Spring, Lock Operation Plate (1)	77	SFPRT17201K	Arm Rest (1)		QJP0603S	Adaptor, Gimens (1)
34	SFXJ172-05	Pin, Lock Operation Plate (1)	78	⊙ SFPKD17203	Arm Base (Silver) (1)	PACKING PARTS		
35(M,MC,PA PE,PC)	SFHK040L	Clamper, AC Cord (1)	78	⊙ SFPKD17206	Arm Base (Black) (1)	P1(MC, EF)	SFHP122C02	Carton Box (Silver) (1)
35(EK)	SFSR-5N-4	Clamper, AC Cord (1)	79	SFPKB17204E	Ring, Arm Base Operation (1)	P1(Other areas)	SFHP122M02	Carton Box (Silver) (1)
35(Other areas)	SFSR-4N-4	Clamper, AC Cord (1)	80	SFPKD12201	Bracket, Arm Base (1)	P1	⊙ SFHP124S02	Carton Box (Black) (1)
36(M,MC,PA PE,PC)	SFUP122-16	Bracket, AC Cord (1)	81	SFPAB17206	Knob, Anti-Skating (1)	P2	SFHH122-01	Pad, Front (1)
36(Other areas)	SFUP122X01	Bracket, AC Cord (1)	82	⊙ SFGK132-01	Cap (Silver) (1)	P3	SFHH122-02	Pad, Rear (1)
37	⊙ RJA9Y	AC Cord (1)	82	⊙ SFGK133S01	Cap (Black) (1)	P4	SFHD122N05	Pad, Top (1)
37(EK) ⊙	QFC1205M	AC Cord (1)	SCREW, NUT AND WASHERS			P5	SFHD122-02	Pad (A), Turntable (1)
37(XL) ⊙	SJAG23	AC Cord (1)	N1	⊙ XTN3+8BFZ	Screw (5)	P6	SFHD122N06	Pad (B), Turntable (1)
37 ⊙	SJA83	AC Cord (1)	N2	⊙ SFXGQ20-02	Screw (3)	P7	SFYH60X60	Polyethylene Bag, Unit& Dust Cover (2)
(PA,PE,PC) ⊙	SJA88	AC Cord (1)	N3	⊙ XTN3+8B	Screw (8)	P8	SFYH40X45	Polyethylene Bag, Turntable (1)
(Other areas) ⊙			N4	⊙ XWG3	Washer (2)	P9	SPB1083	Polyethylene Bag, Accessories (3)
38	SFGC122-03	Rubber, Power Transformer (2)	N5	⊙ XTN26+6B	Screw (3)	P10	SPJ15	Polyethylene Bag, Shell Weight (1)
39	SFGC122-01	Cushion, Power Transformer (3)	N6	⊙ XTN3+8BFN	Screw (8)	P11	SFHZD03M01	Cover Sheet, Dust Cover (1)
41	SFKT122-02	Knob, Pitch Control (1)	N7	SFXG172-01	Screw (3)	P12	SFHZ122-01	Cover Sheet, 45Adaptor (1)
42	⊙ SFKK122-03	Ornament (Silver), Pitch Control (1)	N8	XTN3+5J	Screw (2)	P13	SPP189	Cover Sheet, Cords (2)
42	⊙ SFKK124S01	Ornament (Black), Pitch Control (1)	N9	SFXW172-03	Washer (1)			
43	SFUZ122-01	Felt (1)	N10	SFPEW11003	Washer (6)			
44	SFUP122-09	Holder, LED (1)	N11	⊙ XWE3E10	Washer (3)			
45	SFUP122-01	Bracket, Pitch Control (1)	N12	⊙ XWA3B	Washer (8)			
46	SFDJ122-01E	Connector, 4pin (1)	N13	⊙ XSN3+10S	Screw (3)			
48	SFAU122-02	Bottom Base (1)	N14	SFXW910J02	Washer (1)			
48-1	SFAU122-03	Bottom Cover (1)	N15	⊙ XTN3+10B	Screw (5)			
49	SFUP122-23	Supporter (A), Hinge (2)	N16	⊙ XTN2+10B	Screw (1)			
50	SFUP122-24	Supporter (B), Hinge (2)	N17	⊙ XUC3FT	Circlip (2)			
51	SFUMM02N04	Case, Hinge (2)	N18	XSN17+3FY	Screw (1)			
			N19	⊙ XUC2FT	Circlip (1)			
			N20	⊙ XUC25FT	Circlip (1)			
			N21	⊙ XSN3+14S	Screw (1)			
			N22	RTW-12	Circlip (1)			
			N23	⊙ XSN2+10	Screw (2)			
			N24	⊙ XSN3+6S	Screw (2)			
			N25	⊙ XTN3+6B	Screw (5)			
			N26	XTWS3+14TFZ	Screw (6)			
			N27	SFXG122-02	Screw (1)			
			N29	SFXG122-01	Screw (4)			
			N30	XTN3+14QFZ	Screw (6)			

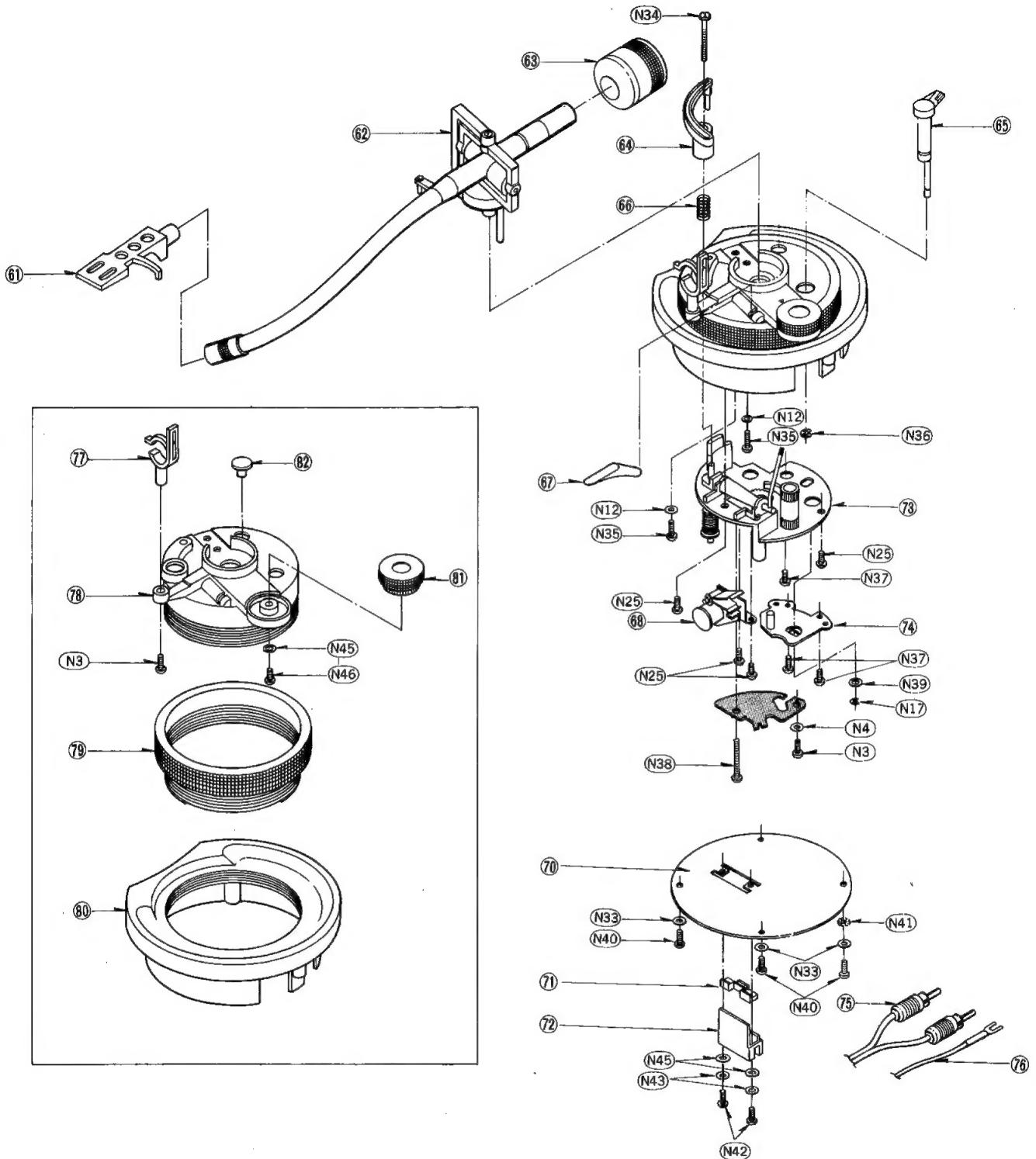
■ EXPLODED VIEWS ● Cabinet and Chassis Parts



Note: For the set with serial number sheet change mark **E** , the power transformer is fitted as shown below.

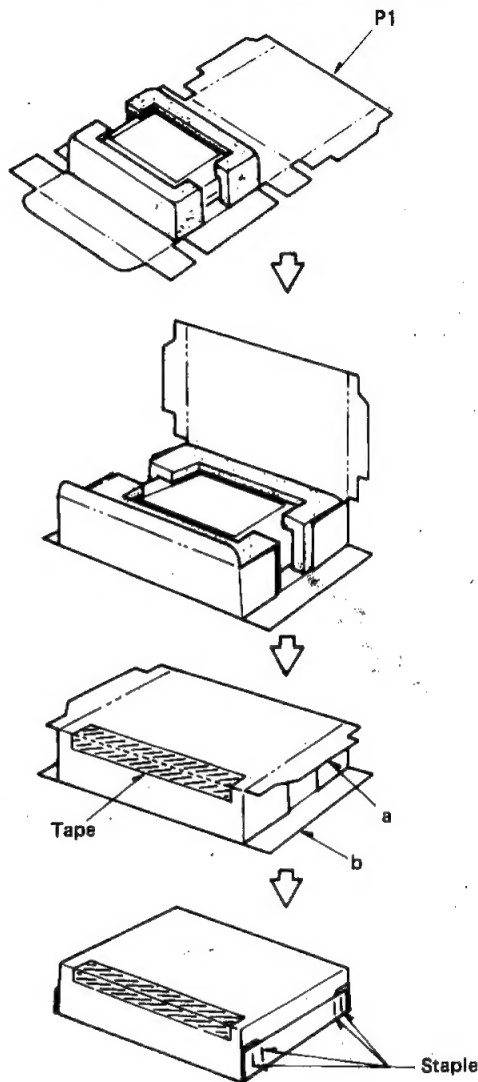
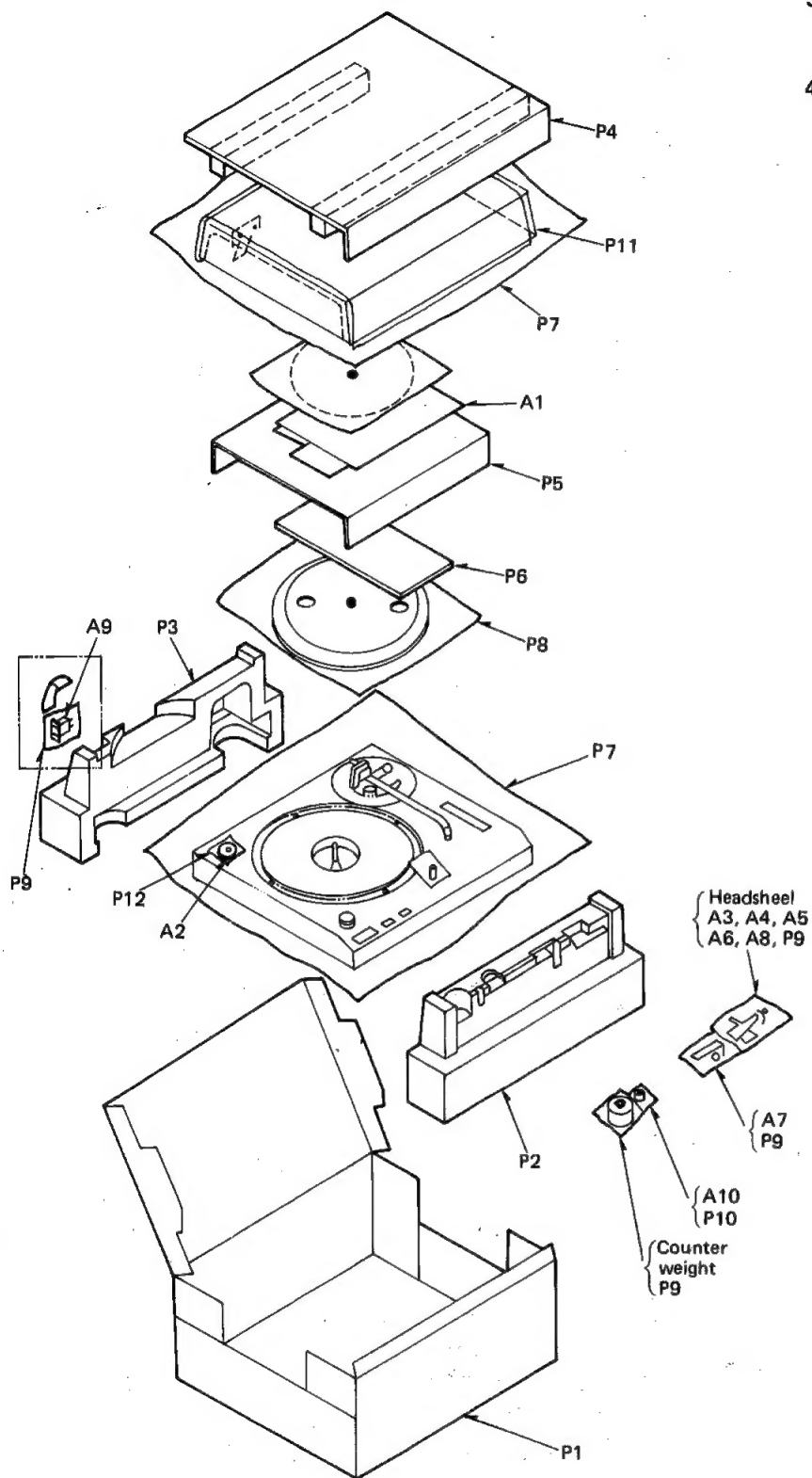


• Tonearm Parts



■ PACKING

1. Place the unit (with cushions attached) as illustrated.
2. Fold the flaps according to the line marks.
3. Seal the top with adhesive tape.
* Use gum tape or adhesive cloth tape of 50mm wide at least
4. For the edges, first fold the flap "a" and then flap "b", and staple. Remember to staple only flap "b". (Use 15 or 16mm staple)



* Stapling positions are shown below.

